

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original) An apparatus for analysing the condition of a machine having a rotating shaft, comprising:
at least one input for receiving measurement data from a sensor for surveying a measuring point of the machine; said measurement data being dependent on rotation of said shaft; data processing means for processing condition data dependent on said measurement data; said data processing means comprising means for performing a plurality of condition monitoring functions (F1, F2,Fn), wherein
said data processing means includes a Field Programmable Gate Array circuit coupled to said at least one input.

2. (original) The apparatus according to claim 1, wherein:
said data processing means comprises at least two data processing devices co-operating so as to control operation of said condition analysis apparatus; a first one of said data processing devices being said Field Programmable Gate Array circuit.

3. (original) The apparatus according to claim 1, wherein:
a second one of said data processing devices (50A)
operates to control the operation of the Field Programmable Gate Array circuit.

4. (currently amended) The apparatus according to claim 1, ~~2~~
~~or 3,~~ further comprising:

a plurality of memory segments for storing program code;
and

program code means, stored on at least one of said memory segments, which when run on said Field Programmable Gate Array circuit (50B) causes the condition analysis apparatus to execute a condition monitoring function.

5. (original) The apparatus according to claim 4 when dependent on claim 3, further comprising:

program code means, stored on at least one of said memory segments, which when run on said second data processing device (50A) causes the second data processing device to control the operation of the Field Programmable Gate Array.

6. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein:

said Field Programmable Gate Array circuit (50B) is programmable to execute said plurality of condition monitoring functions.

7. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein:

at least some of said plurality of condition monitoring functions (F1, F2, Fn) are at least partly embodied by computer program code.

8. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein

at least one of said condition monitoring functions (F1, F2, Fn) generates said condition data in response to measurement data indicative of vibration.

9. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein

said at least one input includes an input adapted to receive shock pulse measurement data; said adapted input comprising means for treatment of said shock pulse measurement data and delivery of said treated data to said data processing means.

10. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein at least one of said condition monitoring functions (F1, F2, Fn), when running, generates said condition data in response to measurement data indicative of temperature.

11. (original) The apparatus according to claim 10, wherein said at least one input includes an input adapted to receive measurement data indicative of temperature; said adapted input comprising means for treatment of said temperature measurement data and delivery of said treated data to said data processing means.

12. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein

said at least one input includes an input adapted to receive an analogue measurement signal indicative of temperature; said apparatus further comprising

an A/D-converter (44B) which is coupled to receive said analogue temperature measurement signal; and wherein

said Field Programmable Gate Array circuit is coupled to receive digital temperature data from said A/D-converter.

13. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein

said at least one input includes at least one analogue-to-digital converter coupled so as to enable reception of an

analogue signal and delivery of a corresponding digital signal to said data processing means.

14. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein said at least one input includes an input (42D) adapted to receive binary tachometering measurement signals.

15. (currently amended) The apparatus according to claim 1, ~~any one of claims 1-8~~, wherein said at least one input for receiving measurement data comprises a plurality of inputs coupled to said Field Programmable Gate Array circuit.

16. (original) The apparatus according to claim 15, wherein said plurality of inputs comprises two or three or more types of inputs selected from the group consisting of shock pulse measurement signal input (42A), temperature signal input (42B), vibration measurement signal input (42C), tachometering measurement signal input (42D).

17. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein said plurality of condition monitoring functions (F1, F2,Fn) includes two or three or more functions selected from the group consisting of: vibration analysis, temperature analysis, shock pulse measuring, spectrum analysis of shock pulse measurement data, Fast Fourier Transformation of vibration measurement data, graphical presentation of condition data on a user interface, storage of condition data in a writeable information carrier on said machine, storage of condition data in a writeable information carrier in said apparatus, tachometering, imbalance detection, misalignment detection.

18. (currently amended) The apparatus according to claim 1,
~~any of the preceding claims~~, wherein
said plurality of condition monitoring functions (F1, F2,Fn)
includes a function for imbalance detection.

19. (original) The apparatus according to claim 18, wherein
said plurality of condition monitoring functions (F1, F2,Fn)
includes a function for balancing.

20. (currently amended) The apparatus according to claim 1,
~~any of the preceding claims~~, wherein
said plurality of condition monitoring functions (F1, F2,Fn)
includes a function for misalignment detection.

21. (original) The apparatus according to claim 20, wherein
said plurality of condition monitoring functions (F1, F2,Fn)
includes a function for alignment.

22. (currently amended) The apparatus according to claim 1,
~~any of the preceding claims~~, wherein
at least one of said plurality of condition monitoring
functions (F1, F2,Fn) has an enabled state and a disabled
state.

23. (currently amended) The apparatus according to claim 1,
~~any of the preceding claims~~, having:
an apparatus body; and
a display provided on, at or in, said apparatus body.

24. (original) The apparatus according to claim 23, wherein:
said display has a display area of at least 4125 mm².

25. (currently amended) The apparatus according to claim 23
~~or 24~~, wherein:

said apparatus body has a body volume of less than 1006
250 mm².

26. (currently amended) The apparatus according to ~~any of~~
~~claims~~ claim 23 ~~[[- 25]]~~, wherein:

said display has a display area of at least 4800 mm².

27. (currently amended) The apparatus according to claim 23
~~or 24~~, wherein:

said apparatus body has a body volume of less than 800
000 mm².

28. (currently amended) The apparatus according to claim 23,
~~any of the preceding claims~~, wherein:

said apparatus body is portable; and

said apparatus body is shaped and adapted to enable a
one-hand grip;

said apparatus body including user interaction means adapted
to enable user interaction by means of said one hand.

29. (currently amended) The apparatus according to claim 23,
~~any of the preceding claims~~, wherein:

said apparatus body is houses readable and writeable
memory means having a storage capacity exceeding 8 megabits.

30. (original) The apparatus according to claim 29, wherein:
said storage capacity exceeds 240 megabits.

31. (currently amended) The apparatus according to claim 1,
~~any of the preceding claims~~, further comprising:
a logger for registering use of at least one of said condition
monitoring functions (F1, F2,Fn).

32. (original) The apparatus according to claim 31, further comprising:

a communication port (16); wherein
said apparatus is adapted to be capable of delivering data indicative of said registered use on said communication port (16).

33. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein:

at least one of said plurality of condition monitoring functions (F1, F2,Fn) has an enabled state and a disabled state.

34. (currently amended) The apparatus according to claim 1, ~~any of the preceding claims~~, wherein:

all or several of said plurality of condition monitoring functions (F1, F2,Fn) have an enabled state and a disabled state such that each of said all or several condition monitoring functions can be individually enabled or disabled.

35. (currently amended). The apparatus according to ~~any of claims~~ claim 31 ~~[[- 34]]~~, further comprising:

means for comparing said registered use with a first reference value,

means for disabling said data processing means or at least one of said condition monitoring functions (F1, F2,Fn) in response to the outcome of said comparison.

36. (currently amended) The apparatus according to ~~any of claims~~ claim 31 ~~[[- 34]]~~, further comprising:

key reception means adapted to allow further use of said data processing means in response to reception of a first key.

37. (currently amended) The apparatus according to ~~any of~~
~~claims~~ claim 1 ~~[[- 14]]~~, further comprising:
key reception means adapted to allow further use of a selected
one of said condition monitoring functions (F1, F2,Fn) in
response to reception of a key associated with said selected
function.

38. (currently amended) The apparatus according to claim 36
~~or 37~~, wherein:
said key reception means includes a communication port (16);
and
said key includes a key word comprising information indicative
of an amount of usage to be allowed.

39. (currently amended) The apparatus according to ~~any of~~
~~claims~~ claim 33 ~~[[- 38]]~~, further comprising:
a user interface for allowing an operator to indicate a
desire to execute a condition monitoring function (F1, F2,Fn);
means for checking whether the indicated function is
disabled or enabled;
means for causing execution of said indicated function
when enabled.

40. (currently amended) The apparatus according to ~~any of~~
~~the preceding claims~~ claim 31, wherein:
said logger is adapted to register use of a first condition
monitoring function a first rate; and
said logger is adapted to register use of a second condition
monitoring function at a second rate.

41. (original) The apparatus according to claim 40, wherein
said second rate is such that use registered at said
second rate causes a higher cost per unit of usage than use
registered at said first rate.

42. (original) The apparatus according to claim 40, wherein said second rate is such that use registered at said second rate causes a lower cost per unit of usage than use registered at said first rate.

43. (currently amended) The apparatus according to claim 31, ~~any of the preceding claims~~, wherein:

said registered use is a parameter indicative of a number of executions of at least one of said condition monitoring functions (F1, F2,Fn).

44. (currently amended) The apparatus according to claim 31, ~~any of the preceding claims~~, wherein:

said registered use is a parameter indicative of an extent of time.